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INTEGRATING DESIGN THINKING INTO A METHODS COURSE

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INTEGRATING DESIGN THINKING INTO A METHODS COURSE

Zoe Falls & Brandy C. Judkins
Teaching, Learning, & Teacher Education



WHO?



ZOE FALLS

Doctoral student and Othmer Fellow in Teaching, Learning, and Teacher Education, specializing in instructional technology and curriculum design. CEHS Research & Design Studio Coordinator. Teaches TEAC 259.

BRANDY C. JUDKINS

Doctoral candidate and Othmer Fellow in Teaching, Learning, and Teacher Education, specializing in English language teaching. Teaches TEAC 317 and TEAC 813M.

WHAT?

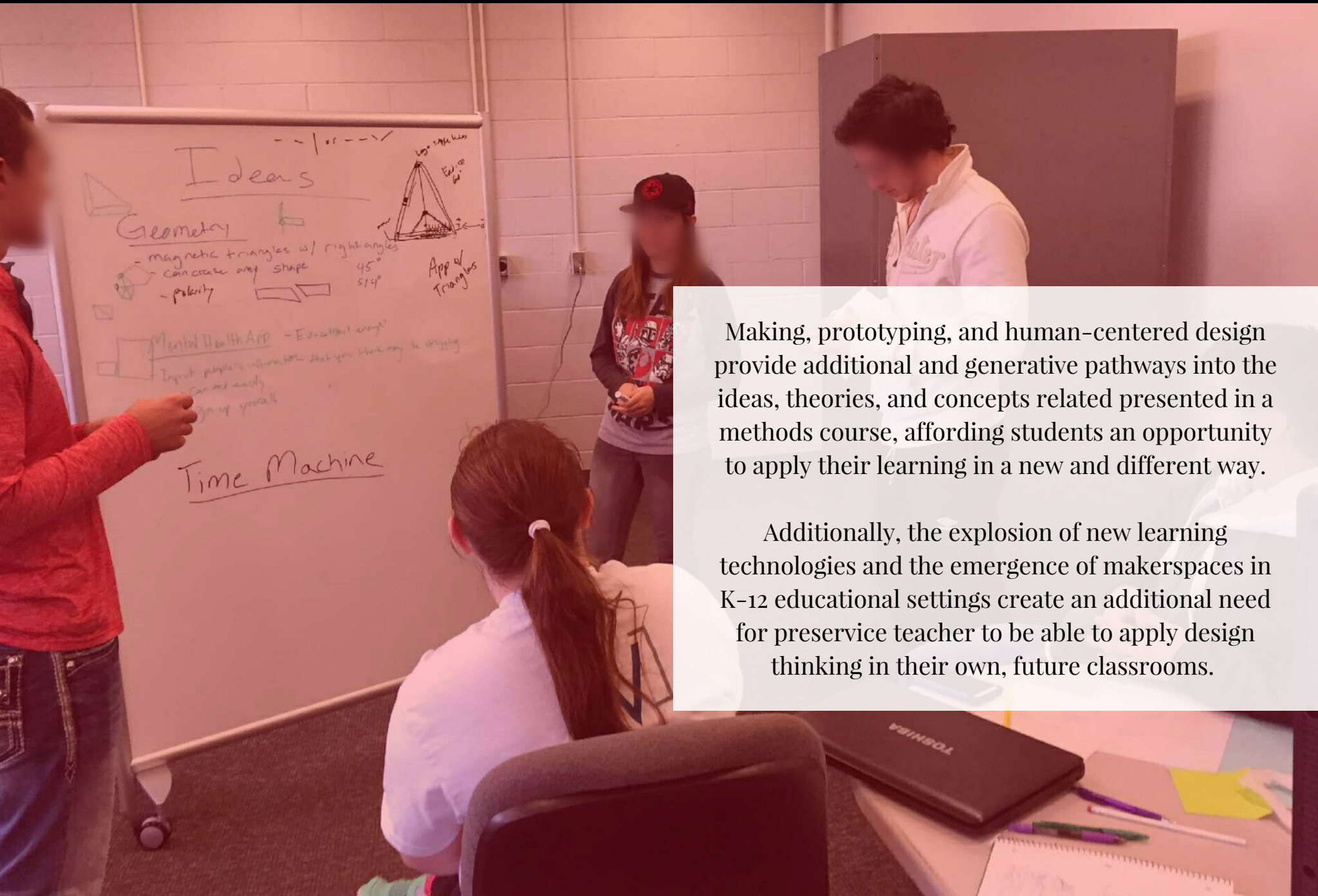
APPLIED DESIGN THINKING

As a part of their methods course in teaching English language learners, Brandy's TEAC 317 and 813M students:

- visit and learn about the CEHS Research & Design Studio
- explore and critically analyze a tool that might be in their classroom
- in small groups or as a whole class, work through the ideation stage of the Stanford d.School model of design thinking
- identify a problem related to teaching or working with English language learners and brainstorm ways to address the problem, potentially via creation of a technological tool or a new physical one
- begin plotting what their new tool would do, how it would function, and why it would help with the problem
- present their idea, justifying not only why it is a good idea, but how it addresses the problem

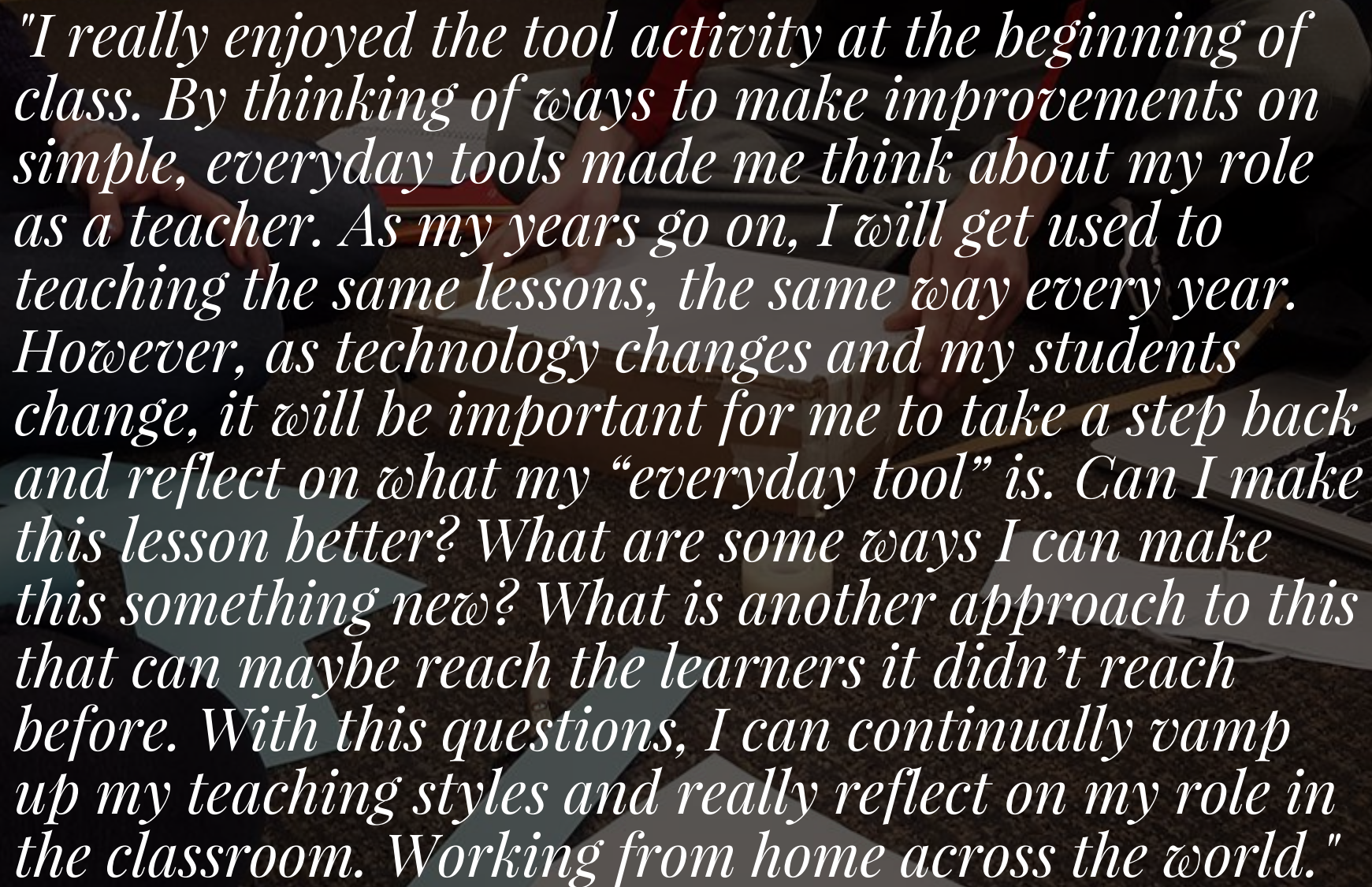


WHY?



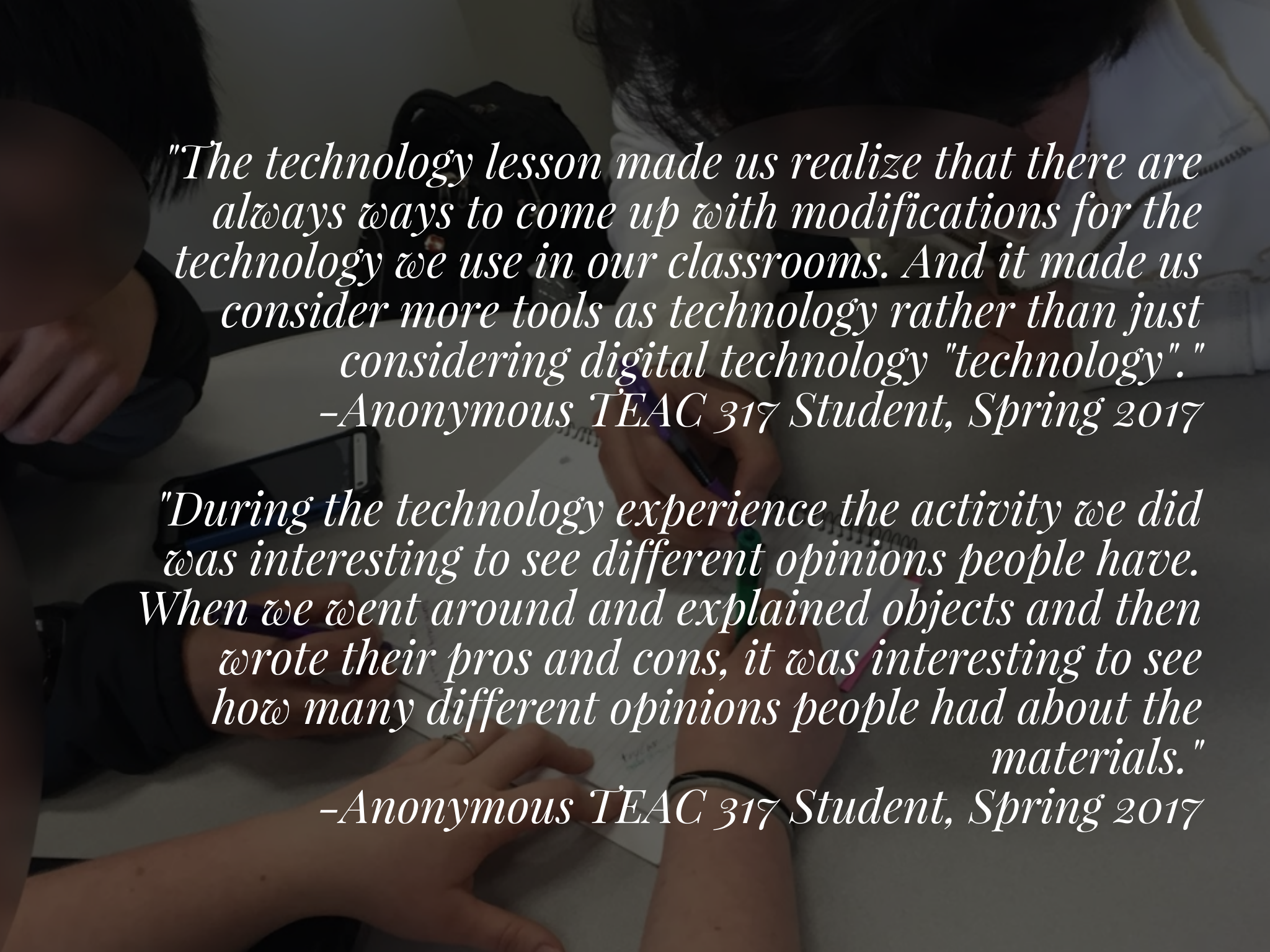
Making, prototyping, and human-centered design provide additional and generative pathways into the ideas, theories, and concepts related presented in a methods course, affording students an opportunity to apply their learning in a new and different way.

Additionally, the explosion of new learning technologies and the emergence of makerspaces in K-12 educational settings create an additional need for preservice teacher to be able to apply design thinking in their own, future classrooms.

A person is sitting at a desk, working on a laptop. The desk is cluttered with various papers, some of which are blue and white. The person's hands are visible, typing on the laptop keyboard. The background is dark and out of focus, suggesting an indoor setting like a home office or a library. The text is overlaid on the image in a white, cursive font.

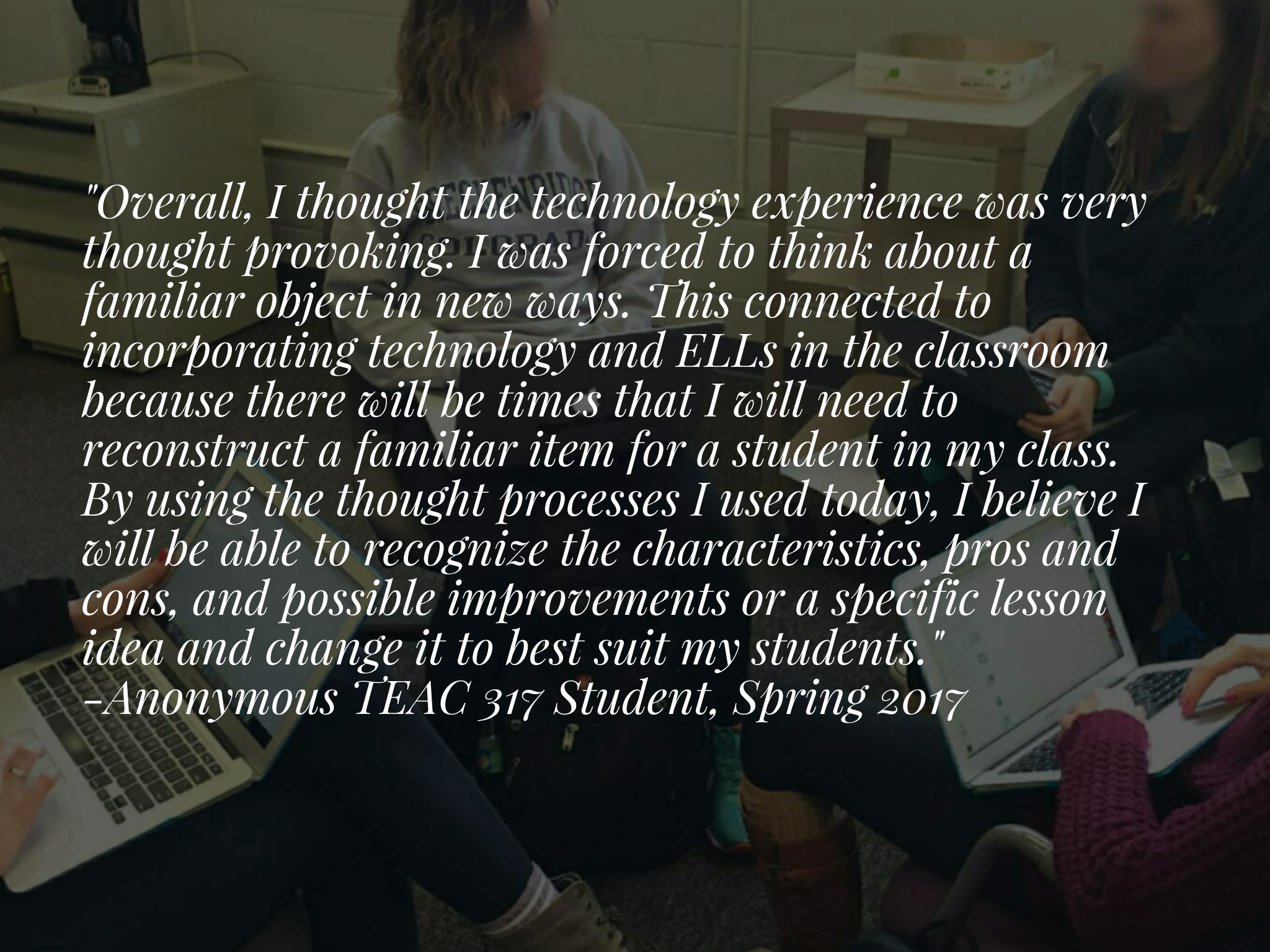
"I really enjoyed the tool activity at the beginning of class. By thinking of ways to make improvements on simple, everyday tools made me think about my role as a teacher. As my years go on, I will get used to teaching the same lessons, the same way every year. However, as technology changes and my students change, it will be important for me to take a step back and reflect on what my "everyday tool" is. Can I make this lesson better? What are some ways I can make this something new? What is another approach to this that can maybe reach the learners it didn't reach before. With this questions, I can continually vamp up my teaching styles and really reflect on my role in the classroom. Working from home across the world."

-Anonymous TEAC 317 Student, Spring 2017

The background image shows a group of students sitting around a table. One student is holding a smartphone, and another is writing on a piece of paper. There are various papers and objects on the table, suggesting a collaborative learning activity.

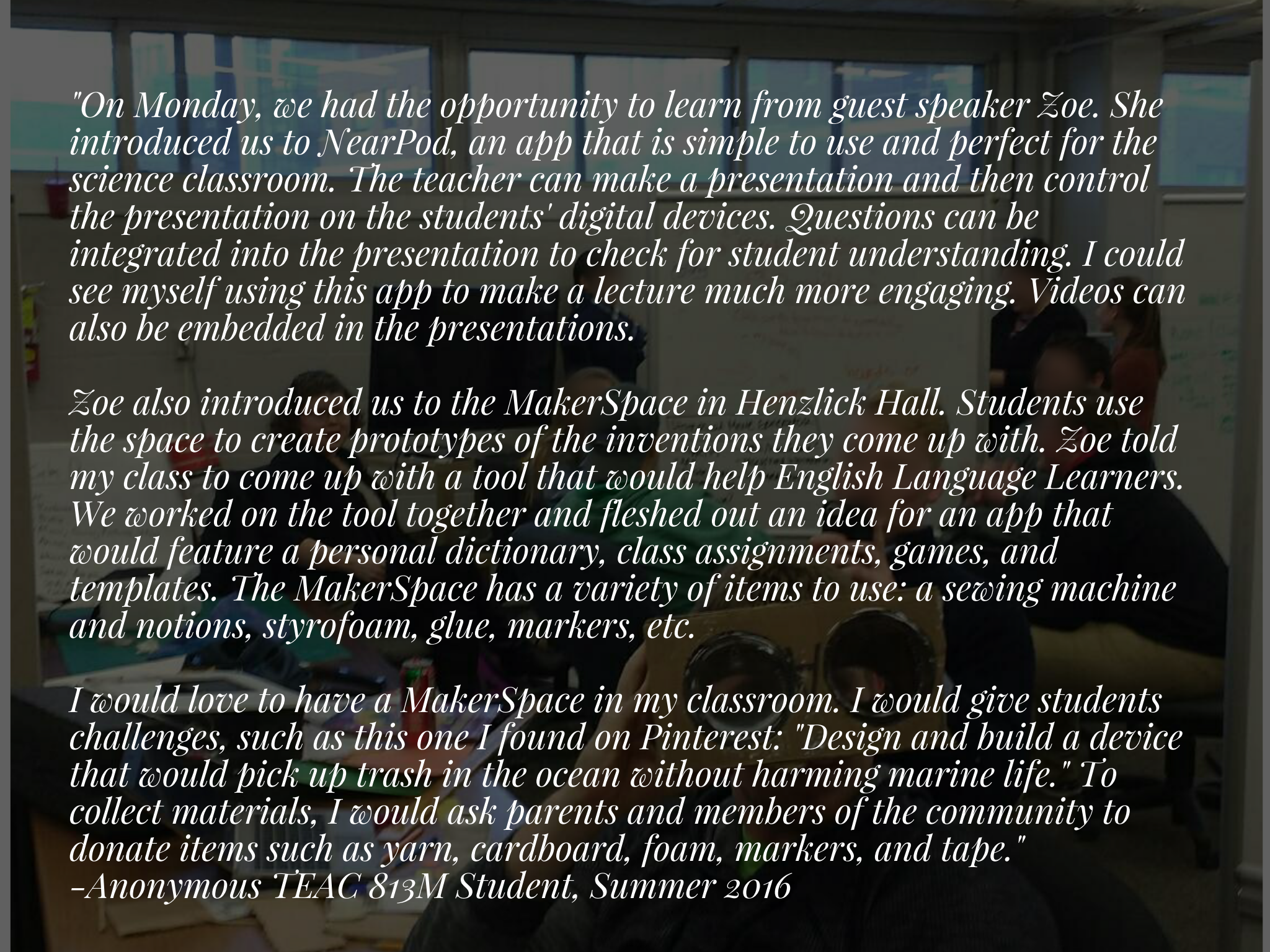
"The technology lesson made us realize that there are always ways to come up with modifications for the technology we use in our classrooms. And it made us consider more tools as technology rather than just considering digital technology "technology"."
-Anonymous TEAC 317 Student, Spring 2017

"During the technology experience the activity we did was interesting to see different opinions people have. When we went around and explained objects and then wrote their pros and cons, it was interesting to see how many different opinions people had about the materials."
-Anonymous TEAC 317 Student, Spring 2017

A background image showing students in a classroom. In the foreground, a student with curly hair is seen from behind, wearing a grey sweatshirt. To the right, another student is partially visible, wearing a dark jacket. Several laptops are open on the floor or desks. The overall scene is dimly lit, with a focus on the students and their work environment.

"Overall, I thought the technology experience was very thought provoking. I was forced to think about a familiar object in new ways. This connected to incorporating technology and ELLs in the classroom because there will be times that I will need to reconstruct a familiar item for a student in my class. By using the thought processes I used today, I believe I will be able to recognize the characteristics, pros and cons, and possible improvements or a specific lesson idea and change it to best suit my students."

-Anonymous TEAC 317 Student, Spring 2017

The background image is a blurred photograph of a classroom. In the foreground, a student is partially visible, looking towards the camera. In the background, a teacher and several other students are engaged in an activity, possibly a presentation or a group project. The room has large windows and a whiteboard.

"On Monday, we had the opportunity to learn from guest speaker Zoe. She introduced us to NearPod, an app that is simple to use and perfect for the science classroom. The teacher can make a presentation and then control the presentation on the students' digital devices. Questions can be integrated into the presentation to check for student understanding. I could see myself using this app to make a lecture much more engaging. Videos can also be embedded in the presentations."

Zoe also introduced us to the MakerSpace in Henzlick Hall. Students use the space to create prototypes of the inventions they come up with. Zoe told my class to come up with a tool that would help English Language Learners. We worked on the tool together and fleshed out an idea for an app that would feature a personal dictionary, class assignments, games, and templates. The MakerSpace has a variety of items to use: a sewing machine and notions, styrofoam, glue, markers, etc."

I would love to have a MakerSpace in my classroom. I would give students challenges, such as this one I found on Pinterest: "Design and build a device that would pick up trash in the ocean without harming marine life." To collect materials, I would ask parents and members of the community to donate items such as yarn, cardboard, foam, markers, and tape."

-Anonymous TEAC 813M Student, Summer 2016

"We had a couple cool things this week. First, I was really impressed on Monday by Nearpod. It seemed really useful for lectures, quizzes, or quickly checking in where students are at during a class period. I've always been nervous to consider using technology in the classroom because I think it can be incredibly distracting. However, after thinking about using Nearpod, and how specifically designed it is for teacher and student users I think it could work great. It would hopefully keep the students engaged in the class because it is much more interesting than just a regular PowerPoint. I think especially with science it could be used in many ways. Also on Monday, I thought the maker day idea was awesome. We keep learning about inquiry as a model for teaching science, and that idea fits perfectly. When we had to come up with a way to improve or help how ELL students learn, it felt so broad and like we had no direction. However, that allowed us to come up with a very interesting idea that we were able to run with and enjoy doing. I think giving a simple "fixable" question to students in my classroom relating to a topic we are covering would be awesome. Although they may not be learning much information that day, they are problem solving and essentially following the scientific method. This would inspire a lot of creativity and problem solving skills. It might be interesting to start off the year with this activity; using a very broad topic in the content area. The second thing this week that stood out to me was the movie Spare Parts. It was cool to watch a story line that involved a situation where students may be ELLs. It showed a side of this demographic that we might not have seen before. Many people think they won't amount to anything and with help from their teacher, they are able to make a huge accomplishment. That was awesome, and taught me that it is very important to believe in every student, and help them to believe in themselves. Though, I do have to say that it didn't really appeal to learning about how to accommodate for ELLs in our classes. only thing I have to say about it

After this week, I am wondering how we can really dealve into helping ELL students in our content area even more effectively and possibly more ways to asses them in a way that will be at their level. "

-Anonymous TEAC 813M Student, Summer 2016

WHAT'S NEXT?

SUMMER 2017

- *Introduction to Design Studio during the first week of TEAC 813M, discussion of joint design thinking project and breaking into design teams*
- *Weekly design thinking experiences*
- *Dedicated design thinking*
- *Weekly blog assignments, with in and out of class elements, using blogging rubric developed for and used in TEAC 259*
- *Shark Tank-style presentation and final assessment of design thinking projects, judged by guest judges familiar with STEM and English language learners*
- *Final reflection blog assignment that synthesizes experiences and content*



Thank you for your time.

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